

西藏翠雀花属七新种

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摘要 描述了自西藏发现的毛茛科翠雀花属七新种,隆子翠雀花,黄花翠雀花,绿房翠雀花,二距翠雀花,扎囊翠雀花,宽片翠雀花和狭裂翠雀花,并给出其与近缘种的区别特征。

关键词 毛茛科,翠雀花属,新种,西藏

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Seven New Species of the Genus *Delphinium*(*Ranunculaceae*)
from Xizang Autonomous Region

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Abstract Seven species of the genus *Delphinium*(*Ranunculaceae*), *D. longziense*, *D. xanthanthum*, *D. viridiovarium*, *D. dicentrum*, *D. zhanangense*, *D. latilimbum* and *D. lagarolobum* are described as new from south-eastern Xizang Autonomous Region. The diagnostic differences between them and their allies are given respectively.

Key words *Ranunculaceae*, *Delphinium*, new species, Xizang Autonomous Region

中国科学院植物研究所标本馆(PE)派队于2017年8~9月在西藏东南部隆子县一带进行了深入采集,采集到大量植物标本,作者在鉴定其中毛茛科翠雀花属(*Delphinium*)^[1~6]植物标本的过程中发现了该属以下七新种。

隆子翠雀花 图1:A~F

Delphinium longziense W. T. Wang, sp. nov.
Fig. 1 :A – F.

(Sect. *Elatopsis* Huth)
In Sinae Sect. *Elatopse* Huth, species circa sexaginta sepalis caerulea vel purpurea habent, et eae tres, *D. pseudocandelabrum* W. T. Wang, *D. xanthanthum* W. T. Wang et *D. longziense* W. T. Wang, sepalis flavis praeditae sunt. Ob sepalis flava, petala et staminoida nigra species tres hae inter sese fortasse affines sunt. In eis, *D. longziense* floribus in racemos

compositos multi-floros dispositis a *D. pseudocandelabro* et *D. xanthantho*, quorum inflorescentiae corymbosae 2–3-florae sunt, praeclare differt.

Perennial herbs. Stems 5–11 cm tall, spreading or slightly retrorsely pubescent, simple, 2-leaved. Basal leaves 1–2, long petiolate; blades papyry, reniform, 2–3.4 cm × 4.5–5.5 cm, at base broadly cordate, on both surfaces on nerves appressed-pubescent, 3-lobed, central lobe obovate-quadrangle, 1.2–1.8 cm broad, 3-lobulate, with lobules broad-ovate entire or 1-denticulate and at apex rounded or obtuse, lateral lobes larger, sublabel-late, 2.8–3.5 cm broad, unequally 3-lobed; petioles 7–8 cm long, spreading-pubescent. Cauline leaves similar to basal ones, but slightly smaller. Compound racemes terminal, 30–40 cm long; terminal raceme 10–12 cm long, 5–6-flowered and

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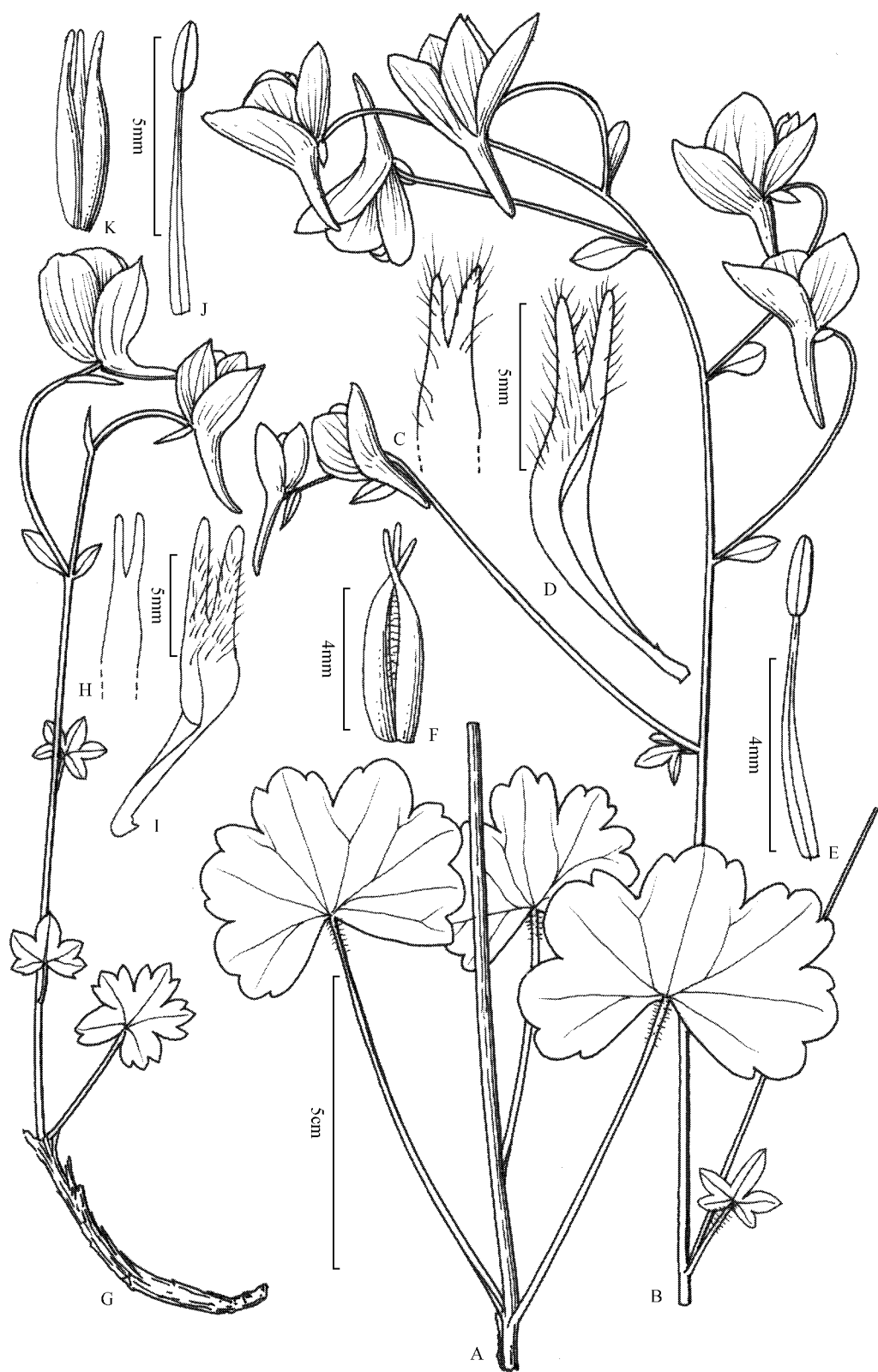


图1 A~F. 隆子翠雀花 :A. 茎下部 ;B. 复总状花序 ;C. 花瓣顶端 ;D. 退化雄蕊 ;E. 雄蕊 ;F. 雌蕊群 G~K. 黄花翠雀花 :G. 植株全形 ;
H. 花瓣顶端 ;I. 退化雄蕊 ;J. 雄蕊 ;K. 雌蕊群
Fig.1 A~F. *Delphinium longziense* :A. Lower part of stem ;B. Compound raceme ;C. Petal apex ;D. Staminode ;E. Stamen ;F. Gynoecium
(from holotype) G~K. *D. xanthanthum* :G. Habit ;H. Petal apex ;I. Staminode ;J. Stamen ;K. Gynoecium(from holotype)

lateral ones 7 – 13 cm long, 2 – 4-flowered; rachis with pedicels densely spreading-puberulous; lower bracts foliaceous, upper ones obovate or spatulate, 0.8 – 1.2 cm long, undivided; pedicels 2 – 4.5 cm long, near apex 2-bracteolate; bracteoles narrow-oblong or narrow-elliptic, 3 – 6 mm × 2 – 2.5 mm. Flower: Sepals yellow, inside sparsely and outside slightly densely yellow-sericeous, upper sepal broad-ovate, 10 – 12 mm × 8 mm, spur straight or slightly decurved, subulate, 12 – 14 mm long, at base 3 mm across, lateral sepals obliquely obovate, 11 mm × 9 mm, lower sepals similar to lateral ones, but longer, 15 mm × 8 mm. Petals 2, black, at apex 2-lobed, lobes narrow-triangular, 1 mm long, with few long hairs. Staminodes 2, black; limbs narrow-oblong, 6.2 mm × 4 mm, 2-fid nearly to the middle of limb, adaxially long yellow-barbate, lobes long ciliate; claws 7 mm long, not appendiculate. Stamens numerous, glabrous; filaments 5 mm long, below lanceolate-linear, above filiform; anthers brownish, oblong, 1.8 – 2 mm × 0.8 – 1 mm. Carpels 3; ovaries 4.2 – 4.5 mm × 0.8 mm, only on ventral sutures pubescent; styles 1.6 – 1.8 mm long, glabrous.

西藏(Xizang): 隆子县, 扎日乡, 从桑巴村至曲桑村途中(Lhünzê Xian, Zhari Xiang, on the way from Sangba Cun to Qusang Cun), alt. 3 460 m, 林边, 草本植物, 花淡绿黄色(at forest margin; herbs with flowers greenish-yellow) 2017 – 09 – 05, PE 西藏考察队(PE Xizang Exped.) 5921(02293621) (**holotype** PE).

我国翠雀花属的密花翠雀花组(Sect. *Elatopsis* Huth) 有约 60 种具蓝色或紫色萼片, 有 3 种: 石滩翠雀花(*D. pseudocandelabrum* W. T. Wang), 黄花翠雀花(*D. xanthanthum* W. T. Wang) 和隆子翠雀花(*D. longziense* W. T. Wang) 则具黄色萼片。此三种具有以下共同特征: 萼片黄色, 花瓣和退化雄蕊黑色, 这说明三种间具有亲缘关系, 其中隆子翠雀花具多花的复总状花序, 而与其他二种区别。在其他二种, 花序为具 2 或 3 花的伞房花序(见下)。

黄花翠雀花 图 1 G ~ K

Delphinium xanthanthum W. T. Wang, sp. nov. Fig. 1 G – K.

(Sect. *Elatopsis* Huth)

Ob sepala flava, petala et staminodia nigra, inflorescentias corymbosas 2 – 3-floras species nova haec est affinis *D. pseudocandelabro* W. T. Wang, a quo foliis minoribus, calcare sepalino sepalis leviter brevior vel eis subaequilongis, petalis apice 2-lobatis carpellis glabris distinguitur. In *D. pseudocandelabro*, folia majora cum laminis 3 – 4 cm latis, calcar sepalinum sepalis multo brevius, petala apice integra, et carpellorum ovaria pubescentia sunt.

Perennial herb. Stem 10 cm tall, simple, densely spreading-pubescent, ca. 2-leaved. Basal leaf solitary, long petiolate; blade papery, reniform, 1.2 cm × 2.5 cm, at base cordate, on both surfaces sparsely appressed-pubescent, 3-lobed, lobes among themselves contiguous, central lobe small, broadly obtusely-trapeziform, 8 mm broad, at apex 3-dentate, lateral lobes flabellate, 2 cm broad, unequally 3-lobulate, lobules at apex 1 – 3-rotund-dentate; petiole 2 cm long, densely retrorse-pubescent. Cauline leaves shortly petiolate; blades pentagonal, 0.8 – 1 cm × 1.4 – 1.7 cm, 3-lobed nearly to the middle of blade, central lobe broad-ovate, lateral lobes obliquely broad-obovate, unequally 2-lobed, with secondary lobes ovate and entire; petioles 0.6 – 1 cm long. Corymb terminal, 3.5 cm long, 2-flowered; basal bract 5.5 mm long, 3-lobed, upper bract narrow-ob-lanceolate, 10 mm long, undivided; pedicels 3.5 cm long, densely spreading-puberulous, above the middle or near-flower 2-bracteolate; bracteoles linear, 4.5 – 6 mm × 1 – 2 mm. Flower: Sepals yellow, inside sparsely, outside slightly densely yellowish-sericeous, upper sepal suborbicular, 12 mm × 14 mm, spur thickly subulate, 13 – 14 mm long, at base 3 – 4 mm across, lateral sepals broad-obovate, 12 × 15, lower sepals obovate 13 mm × 11 mm. Petals 2, black, glabrous, apex 2-lobed, lobes linear 2.2 – 4.5 mm long. Staminodia 2, black; limbs oblong, 10 mm × 4.6 mm, 2-fid(lobes lanceolate-linear, 5 – 6 mm × 1.5 – 1.8 mm), adaxially below lobes and on lobes long yellow-barbate; claws 7 mm long, at base 1-appendiculate, Stamens numerous, glabrous, filaments lanceolate-linear, 5.5 – 6 mm long; anthers dark-blue, oblong, 1.8 – 2 mm × 0.8 – 1 mm. Carpels 3, glabrous; ovaries greenish-white, at apex

dark-blue, 4 mm × 0.8 mm; styles white, 1 mm long.

西藏(Xizang) 隆子县 扎日乡 纳拉山(Lhünzê Xian Zhari Xiang, Mt. Nala), alt. 3 400 m, 山坡上(on slopes) 2017-09-03, PE 西藏考察队(PE Xizang Exped.) 5813(02293611) (**holotype**, PE).

本种的萼片黄色, 花瓣和退化雄蕊黑色, 花组成具 2 花的伞房花序, 因此与也具上述特征的石滩翠雀花(*D. pseudocandelabrum* W. T. Wang) 相近缘, 与后者的区别在于本种的叶较小, 叶片宽 1.4 ~ 2.5 cm, 萼距比萼片稍短或近等长, 花瓣顶端 2 浅裂, 心皮无毛。在石滩翠雀花, 叶较大, 叶片宽 3 ~ 4 cm, 萼距比萼短的多, 花瓣顶端全缘, 心皮的子房被柔毛。(王文采, 1983; Wang & Warnock 2001)

绿房翠雀花 图 2 :A ~ E

Delphinium viridiovarium W. T. Wang, sp. nov. Fig. 2 :A - E.

(Sect. *Elatopsis* Huth)

Ob folia 3-lobata, calcar sepalinum sepalis subaequilongum, petala et staminodia nigra, carpella glabra species nova haec est affinis *D. langxianensi* W. T. Wang, a quo foliis majoribus, floribus in corymbis 3-floros dispositis, pedicellis supra medium 2-bracteolatis differt. In *D. langxianensi*, folia minora cum laminis 1 - 2 cm longis et 1.5 - 3.6 cm latis, flores in racemos 7 - 8-floros dispositi, et pedicelli ad apicem 2-bracteolati sunt.

Perennial herb. Stem ca. 20 cm tall, simple, with petioles and pedicels spreading-puberulous, 3-leaved. Basal leaf solitary, long petiolate; blade papery, reniform, ca. 3.8 cm × 7 cm, at base cordate, adaxially on nerves appressed-puberulous, abaxially sparsely puberulous, 3-lobed nearly to the middle of blade, central lobe obtusely-ovate, 1.5 cm broad, 3-lobulate with lobules broad-ovate, 1 - 2-denticulate or entire, lateral lobes subflabellate, 3.5 - 4 cm broad, unequally 2-lobed, secondary lobes shortly obtusely-ovate or broad-ovate, unequally 3-lobulate; petiole 13 cm long, at base shortly vaginate. Cauline leaves similar to basal one, but with smaller blades and shorter petioles. Corymb terminal, ca. 8 cm long, 3-flowered; bracts lanceolate or narrow-lanceolate, 1.2 - 1.8 cm long; pedicels

3.5 - 8 cm long, above the middle 2-bracteolate; bracteoles narrow-lanceolate or lanceolate, 5 - 10 mm long, puberulous. Flower: Sepals blue-purple, inside glabrous, outside sparsely puberulous, upper sepal broad-ovate, 13 mm × 10 mm, spur subulate, 13 - 14 mm long, slightly decurved, at base 4 - 5 mm across, lateral sepals orbicular-obovate, 11 mm × 15 mm, at apex shortly acuminate and ciliate, lower sepals obovate, 18 mm × 11 mm. Petals 2, black, glabrous, apex 2-lobed. Staminodes 2, black; limbs ovate-oblong, 7 mm × 5 mm, 2-lobed(lobes 3 - 4 mm long), adaxially whitish-barbate; claws 7 mm long, at base 1-appendiculate. Stamens numerous, glabrous; filaments 6 - 7.5 mm long, below lanceolate-linear, above filiform; anthers dark-blue, oblong, 1 - 1.3 mm × 0.7 - 1 mm. Carpels 3, glabrous; ovaries green, 4.8 mm × 0.8 mm; styles white, 2 - 2.4 mm long.

西藏(Xizang): 洛扎县, 拉康镇, 卡久寺附近(Lhoshag Xian, Lakang Zhen, near Kaji Temple), alt. 3 934 m, 山坡路边, 草本植物(near roadsides on slopes, herbs) 2017-09-14, PE 西藏考察队(PE Xizang Exped.) 6634(02293616) (**holotype**, PE).

本种的叶 3 浅裂, 萼距与萼片近等长, 花瓣和退化雄蕊黑色, 心皮无毛, 因此与也具上述特征的朗县翠雀花(*D. langxianense* W. T. Wang) 相近缘, 与后者的区别在于本种的叶较大, 叶片长达 3.8 cm, 宽达 7 cm, 花组成具 3 花的伞房花序, 花梗在中部之上具 2 小苞片。在朗县翠雀花, 叶较小, 叶片长 1 ~ 2 cm, 宽 1.5 ~ 3.6 cm, 花组成具 7 ~ 8 花的总状花序, 花梗在顶端具 2 小苞片(王文采 2014)。

二距翠雀花 图 2 :F ~ J

Delphinium dicentrum W. T. Wang, sp. nov. Fig. 2 :F - J.

(Sect. *Elatopsis* Huth)

Ob foliorum laminam lobatam et lobos inter sese contiguous, petala et staminodia nigra, pedicellos prope flores 2-bracteolatos species nova haec est similis *D. langxianensi* W. T. Wang, a quo folii basalis lamina 2-nervi et 2-lobata, sepalo infero uno basi breviter calcarato valde differ. In *D. langxianensi*, folii lamina 3-nervis et 3-lobata, et sepala infera haud calcarata sunt.



图 2 A~E. 绿房翠雀花 :A. 基生叶 ;B. 茎顶部和伞房花序 ;C. 退化雄蕊 ;D. 雄蕊 ;E. 雌蕊群 F~J. 二距翠雀花 :F. 根状茎、茎基部和基生叶 ;G. 总状花序 ;H. 退化雄蕊 ;I. 雄蕊 ;J. 雌蕊群

Fig.2 A~E. *Delphinium viridiovarium* :A. Basal leaf ;B. Apical part of stem and corymb ;C. Staminate ;D. Stamen ;E. Gynoecium(from holotype) F~J. *D. dicentrum* :F. Rhizome basal part or stem and basal leaf ;G. Raceme ;H. Staminate ;I. Stamen ;J. Gynoecium(from holotype)

Perennial herb. Stem ca. 18 cm tall, simple, slightly retrorsely hirtellous, 2-leaved. Basal leaf solitary, long petiolate; blade papery, reniform, 2 cm $\times$ 4.6 cm, at base cordate, on both surfaces very sparsely hirtellous and below on margins ciliate, 2-lobed, with 2 primary nerves (each primary nerve above base 3-branched), lobes 3–4-lobulate, lobules among themselves contiguous, shortly obtrapeziform or broad-ovate, at apex rounded, entire or 1-rotund-denticulate; petiole 11 cm long, retrorse-hirtellous, at base narrowly vaginate. Cauline leaves not seen. Raceme terminal, ca. 20 cm long, 3-flowered; rachis with pedicels retrorse-hirtellous; bracts shortly petiolate, blades broad-triangular, 2.5–3.5 cm $\times$ 3–6.5 cm, at base subtruncate, 3-parted, central lobe obtrapeziform, at apex 3-dentate, lateral lobes larger, broad-obovate, unequally 2-lobed; pedicels 0.5–1.1 cm long, near flower 2-bracteolate; bracteoles linear, 10–12(–16) $\times$ 1.5–2(–3) mm. Flower: Sepals purplish, inside glabrous, outside appressed-pubescent, upper sepal broad-ovate, 20 mm $\times$ 15 mm, spur upwards spreading, rarely lecurved, thickly subulate, 13–15 mm long, at base 3–5 mm across, lateral sepals broad-elliptic, 15 mm $\times$ 10 mm, lower sepals similar to lateral ones, but larger, 20 mm $\times$ 9–12 mm, and the left lower sepal at base with a short tubular spur 4 mm long and 1.8 mm in diam. Petals 2, black, glabrous, apex 2-lobed. Staminodes 2, black; limbs oblong, 10 mm $\times$ 4 mm, 2-lobed to the middle, adaxially below lobes and on lower parts of lobes long white-barbate; claws 7 mm long, at base not appendiculate. Stamens numerous, glabrous; filaments 7.5–8 mm long, below lanceolate-linear, above filiform; anthers dark, oblong, 1.4 mm $\times$ 0.6–0.8 mm. Carpels 3; ovaries 6–8 mm $\times$ 0.8–1.8 mm, pubescent or subglabrous; styles 2.5–3 mm long, glabrous.

西藏(Xizang): 隆子县, 从玉麦乡至曲桑村垭口(Lhünzê Xian, on the way from Yumai Xiang to Qusang Cun) alt. 4398 m, 高山草地上, 花淡紫色(on alpine meadow, fls. light purple), 2017–09–07, PE 西藏考察队(PE Xizang Exped.) 6112 (02293612) (**holotype** PE).

本种叶的叶片浅裂, 裂片互相邻接, 花瓣和退

化雄蕊黑色, 花梗在顶端近花处具 2 小苞片, 因此与也具上述特征的朗县翠雀花(*D. langxianense* W. T. Wang)相似, 但本种有两个十分独特的特征, 即其叶片具 2 条一级脉, 每条一级脉在基脉之上具 3 条分枝, 叶片 2 浅裂, 再就是花的左侧下萼片在基部具 1 短筒状距。在朗县翠雀花以及翠雀花属其他种, 叶片具 1 条中脉和 2 条侧生基出脉, 叶片分裂成 3 个一级裂片, 花只有上萼片具 1 条距, 其他的 2 侧萼片和 2 下萼片均无距。

扎囊翠雀花 图 3 :A ~ E

Delphinium zhanangense W. T. Wang, sp. nov. Fig. 3 :A–E.

(Sect. *Elatopsis* Huth)

Species nova haec est affinis *D. hillcoatiae* Munz, a quo caulibus racemorum rhachidibus et pedicellis haud flavor-glanduloso-puberulis, sepalis apice longe acuminates recedit. In *D. hillcoatiae*, caules racemorum rhachides et pedicelli patule flavor-glanduloso-puberuli et appresse albo-puberuli, sepala apice acuta sunt.

Perennial herbs. Stems 32–80 cm tall, simple or with ca. 2 short vegetative branthes, densely puberulous, 6–10-leaved. Basal leaves not seen. Cauline leaves long petiolate; blades papery, reniform or pentagonal, 3–5.2 cm $\times$ 4.5–8 cm, at base cordate, on both surfaces sparsely puberulous or subglabrous, 3-fid to the middle of blade or 3-parted, central lobe obtrapeziform, rhombic or broad-rhombic, 1.6–2 cm broad, at apex subrounded or acute, 3-dentate or 3-lobed, secondary lobes 1–4-denticulate, lateral lobes larger, flabellate, unequally 2-lobed, upper secondary lobe similar to primary central lobe, lower secondary lobe once again unequally 2-lobed; petioles 1–7.5 cm long. Racemes terminal, 20–50 cm long, 11–22-flowered; rachis with pedicels densely spreading-puberulous; lower bracts foliaceous, upper ones lanceolate or linear, 0.8–1.5 cm long, undivided; pedicels 1–6 cm long, above the middle to near flower 2-bracteolate; bracteoles narrow-oblong or narrow-spatulate, 6–15 mm $\times$ 1–2 mm, longitudinally 1-nerved. Flower: Sepals 5, upper sepal purplish, narrow-ovate, 14–18 mm $\times$ 5–7 mm, at apex long acuminate, inside glabrous,

outside sparsely puberulous or subglabrous, on margin ciliolate, spur subulate, 15 – 18 mm long, at base 4 – 5 mm across, lateral and lower sepals white, tinged with blue, elliptic-ovate, 14 – 16 mm × 6 – 8 mm, at apex long acuminate, subglabrous, longitudinally 3-blue-nerved. Petals 2, black, glabrous, apex 2-lobulate. Staminodes 2, black; limbs ovate, 6 mm × 4 mm, at apex 2-lobulate, adaxially below lobules densely yellow-barbate; claws 6 mm long, at base 1-appendiculate. Stamens numerous, glabrous; filaments 5.5 – 7 mm long, lanceolate-linear, near apex filiform; anthers dark, oblong, 1.2 – 1.8 mm × 0.6 – 1 mm. Carpels 3; ovaries 4 mm × 0.8 mm, puberulous; styles 2.2 – 2.5 mm long, glabrous.

西藏(Xizang): 扎囊县, 阿扎乡(Zhanang Xian, Azha Xiang), alt. 3 788 m, 林中, 草本植物, 花淡紫色(in forest herbs fls. light purple) 2017 – 08 – 25, PE 西藏考察队(PE Xizang Exped.) 5088 (02293615) (**holotype**, PE).

本种与毛茛叶翠雀花(*D. hillcoatiae* Munz) 在亲缘关系上相近, 与后者的区别在于本种的茎、总状花序轴和花梗均无黄色短腺毛, 以及萼片顶端长渐尖。在毛茛叶翠雀花茎、总状花序轴和花梗均被开展的黄色短腺毛和贴伏的白色短柔毛, 萼片顶端急尖。(王文采, 1979; Wang & Warnock 2001)

宽片翠雀花 图 3 F ~ J

Delphinium latilimbum W. T. Wang, sp. nov.
Fig. 3 F – J.

(Sect. *Delphinastrum* DC.)

Species nova haec est affinis *D. hirticauli* Franch., a quo caulibus glabris vel sparse pubescentibus, racemis 2 – 4-floris, pedicellis prope apicem dense puberulis, staminodiorum limbis orbiculari-obovatis, ovariis dense pubescentibus distat. In *D. hirticauli*, caules inferne hirsutis, racemi 5 – 10-flori, pedicelli glabri, staminodiorum limbi ovati, ovaria glabra vel subglabra sunt.

Perennial herbs. Stems 6 – 20 cm tall, simple or long 1 – 3-branched, glabrous or with very sparse hairs. Basal leaf usually solitary, long petiolate; blade papery, reniform, 3.5 – 5 cm × 6.5 – 10 cm, at base cordate, on both surfaces with very sparse and very short appressed hairs, 3-parted, central

lobe cuneate-rhombic or cuneate, 2 – 4 cm broad, 3-lobed, with secondary lobes lanceolate-oblong, undivided or 2 – 3-lobulate, at apex often mucronate, lateral lobes flabellate, 3 – 6.5 cm broad, unequally 2-fid; petiole slender, 8 – 19 cm long, glabrous, at base narrowly vaginate. Cauline leaves similar to basal one, but smaller. Racemes terminal, 3 – 20 cm long, 2 – 4-flowered; rachis glabrous; basal bract similar to cauline leaves, petiolate, sometimes 3-sect, with linear ultimate lobes, upper bracts narrow-lanceolate or linear, 1 – 3 cm long; pedicels 2 – 14.5 cm long, near flower densely spreading-puberulous, above the middle to near flower 2-bracteolate; bracteoles linear or subulate, 7 – 15 mm × 0.5 – 2 mm, puberulous. Flower: Sepals blue, inside glabrous, only in lower sepals below with a few short hairs, outside appressed-puberulous, upper sepal broad-ovate, 15 – 17 mm × 10 mm, spur subulate, 18 – 24 mm long, straight or slightly upwards curved, at base 3 – 4 mm across, lateral sepals sub-elliptic, 15 – 18 mm × 7 – 8 mm, lower sepals similar to lateral ones, but larger, 16 – 20 mm × 7 – 10 mm. Petals 2, blue, glabrous, apex entire. Staminodes 2; limbs blue, orbicular-obovate, 6 mm × 4 mm, 2-lobed, adaxially above base densely and shortly yellow-barbate; claws white, 5 mm long, base not appendiculate. Stamens numerous, glabrous; filaments 4 – 6 mm long, below linear, above filiform; anthers dark-blue, oblong, 0.8 – 1 mm × 0.3 – 0.5 mm. Carpels 3; ovaries 4 mm long, densely pubescent; styles 2 – 2.2 mm long, glabrous.

西藏(Xizang): 措那县, 自麻玛乡至县城途中(Cuona Xian, on the way from Mama Xiang to the city of Cuona Xian), alt. 3 449 – 4 414 m, 山坡, 草本植物, 花蓝堇色(on slopes, herbs, fls. blue-violet) 2017 – 09 – 12, PE 西藏考察队(PE Xizang Exped.) 6429(02293619) (**holotype**, PE).

本种与毛茎翠雀花(*D. hirticaule* Franch.) 近缘, 与后者的区别在于本种的茎无毛或有少数柔毛, 总状花序具 2 ~ 4 花, 花梗在顶端密被短柔毛, 退化雄蕊的瓣片圆倒卵形, 子房密被柔毛。在毛茎翠雀花茎下部被长硬毛, 总状花序具 5 ~ 10 花, 花梗无毛, 退化雄蕊的瓣片倒卵形, 子房无毛或近无毛。(王文采, 1979; Wang & Warnock, 2001)



图 3 A ~ E. 扎囊翠雀花 :A. 茎基部 ,具一枯萎的最下部茎生叶 ;B. 总状花序 ;C. 退化雄蕊 ;D. 雄蕊 ;E. 雌蕊群 F. 基生叶 ;G. 总状花序 ;H. 退化雄蕊 ;I. 雄蕊 ;J. 雌蕊群

Fig. 3 A ~ E. *Delphinium zhanangense* :A. Basal part of stem ,with a withered lowermost cauline leaf ;B. Raceme ;C. Staminate ;D. Stamen ;E. Gynoecium(from holotype) F ~ J. *D. latilimbum* :F. Basal leaf ;G. Raceme ;H. Staminate ;I. Stamen ;J. Gynoecium(from holotype)

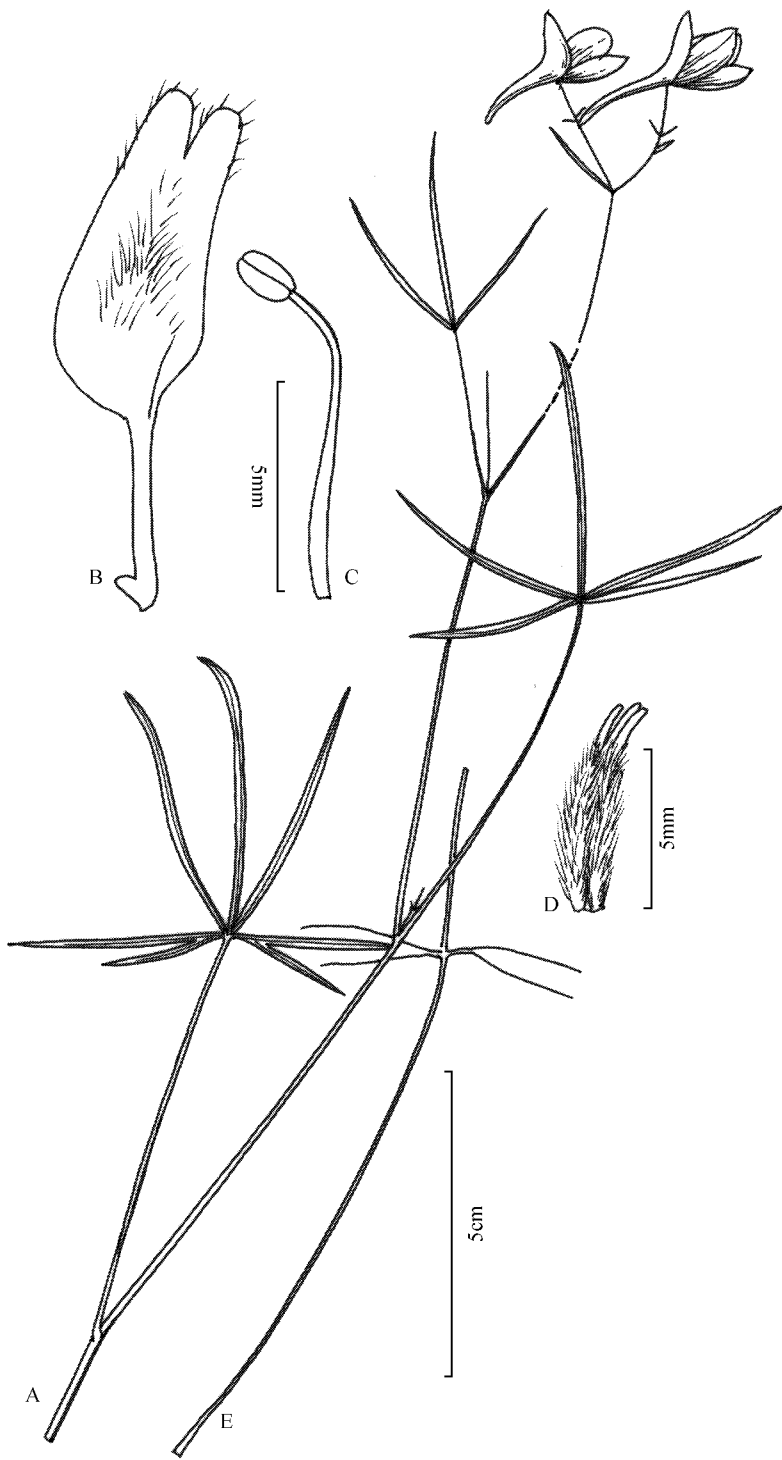


图 4 狭裂翠雀花 A. 开花茎 B. 退化雄蕊 C. 雄蕊 D. 雌蕊群 E. 基生叶

Fig. 4 *Delphinium lagarolobum* A. Flowering stem ;B. Staminode ;C. Stamen ;D. Gynoecium (from holotype) ;E. Basal leaf (from isotype)

狭裂翠雀花 图 4

Delphinium lagarolobum W. T. Wang , sp.
nov. Fig. 4.
(Sect. *Delphinastrum* DC.)

Ob folia 3-secta dissecta , eorum lobos ultimos linearibus , inflorescentias corymbosas paucifloras , calcar sepalinum subulatum seaplis longius , ovarium pilis densis tectum species nova haec est similis *D. caeruleo* Jacq. ex Camb. , a quo foliis semel vel bis

divisis, lobis ultimis angustioribus 1 – 2 mm latis, staminodiorum limbis oblongo-ovatis apice 2-lobulatis, carpellis tribus praeclare differt. In *D. caeruleo*, folia ter vel quarter divisa, eorum lobi ultimi latiores 1.5 – 2.5 (– 4) mm lati, staminodiorum limbi late obovati vel suborbiculares apice integri vel emarginati, et carpella quinque sunt. Perennial herbs. Stems ca. 30 cm tall, with petioles retrorsely appressed-puberulous, 1 – 2-branched. Basal leaf solitary, long petiolate; blade papery, deltoid in outline, ca. 3 cm × 5 cm, at base subtruncate, adaxially glabrous, abaxially on nerves sparsely pubescent, 3-sect and 1 – 2 times divided, central segment narrow-linear, 3 cm × 0.1 cm, near the middle with a small lobule, lateral segments ca. 2.5 cm long, unequally 2-parted to near base, ultimate lobes narrow-linear, upper lobe larger, 2.4 mm × 0.1 mm, lower lobe 1.5 cm × 0.1 mm; petiole 10.8 cm long. Lower cauline leaves similar to basal one, upper ones with central segment and 2 lateral segments all narrow-linear, 1 – 2 mm broad, undivided. Corymbs terminal, 2 – 4.5 cm long, 2 – 5-flowered; bracts petiolate or sessile, 3-sect, with 3 narrow-linear segments all undivided; pedicels 2 – 4 cm long, densely puberulous, near or above the middle 2-bracteolate; bracteoles linear, 3 – 7 mm × 0.3 – 1 mm, puberulous. Flower: Sepals blue, inside glabrous, outside yellowish-puberulous, upper sepal broad-ovate, 14 mm × 9 mm, spur subulate, ca. 16 mm long, slightly decurved, at base 4 mm across, lateral sepals obliquely elliptic, 14 mm × 8 mm, lower sepals narrow-elliptic, 13 mm × 5 mm. Petals 2, blue, glabrous, apex entire. Staminodes 2; limbs blue, oblong-ovate, 7 mm × 3.5 mm, at apex 2-lobulate, adaxially below lobules yellow-barbate, above eiliate; claws white, 4 mm long, glabrous, at base 1-appendiculate. Stamens numerous, glabrous; filaments 4 – 5 mm long, narrow-linear, near apex narrowed; anthers dark-purple, oblong, 1 mm × 0.6 – 0.7 mm. Carpels 3; ovaries 5 mm long, densely white-pubescent; styles blue, 1 mm long.

西藏(Xizang): 隆子县, 玉麦乡, 玉麦雄曲山

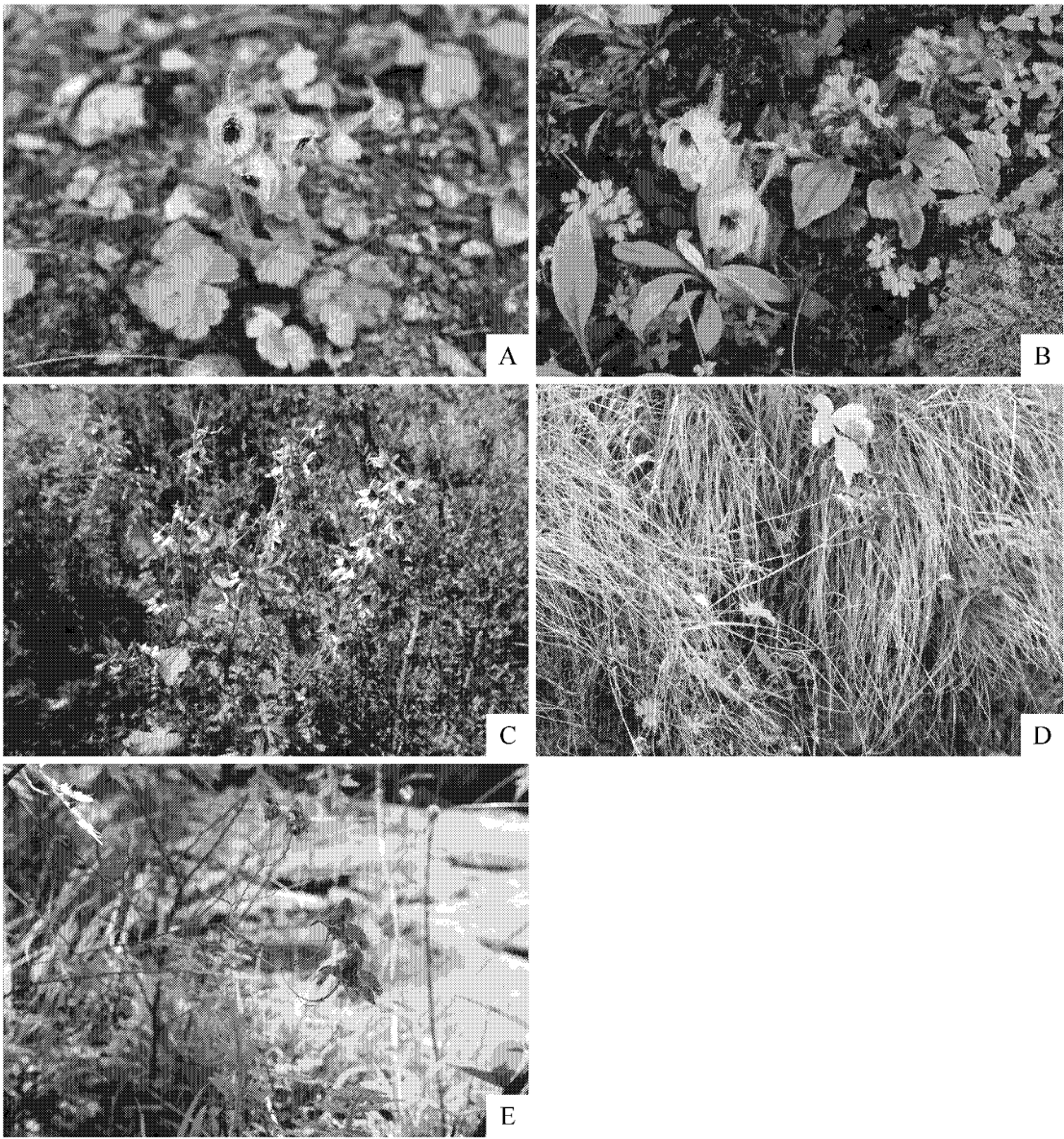
谷(Lhünzê Xian, Yumai Xiang, Yumaixiongqu Valley), alt. 2 935 m, 山谷林边, 草本植物, 花蓝色 (forest margin in valley, herbs with blue flowers), 2017 – 09 – 06, PE 西藏考察队 (PE Xizang Exped.) 5977(02293617) (**holotype**, PE).

本种的叶 3 全裂并细裂, 末回裂片条形, 花序伞房状, 具少数花, 萼距钻形, 比萼片长, 子房密被柔毛, 因此与也具上述特征的蓝翠雀花(*D. caeruleum*) 相似, 与后者的区别在于本种的叶 1 ~ 2 回分裂, 末回裂片较狭窄, 宽 1 ~ 2 mm, 退化雄蕊的瓣片长圆状卵形, 顶端 2 微裂, 心皮 3 枚。在蓝翠雀花, 叶 3 ~ 4 回分裂, 末回裂较宽, 宽 1.5 ~ 2.5 (~ 4) mm, 退化雄蕊的瓣片宽倒卵形或近圆形, 顶端全缘或微凹, 心皮 5 枚。(Hook. f. & Thoms., 1872; 王文采, 1979; Rau, 1993; Wang & Warnock 2001)

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图版 I A. 隆子翠雀花 B. 黄花翠雀花 C. 扎囊翠雀花 D. 宽片翠雀花 E. 狭裂翠雀花

Plate I A. *Delphinium longziense* W. T. Wang ; B. *Delphinium xanthanthum* W. T. Wang ; C. *Delphinium zhanangense* W. T. Wang ; D. *Delphinium latilimbum* W. T. Wang ; E. *Delphinium lagarolobum* W. T. Wang